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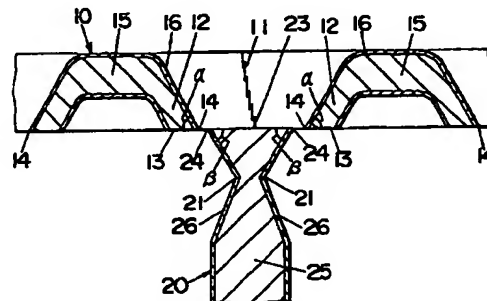
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(54) **Cutter combination for an electric shaver**

(57) A cutter combination for an electric shaver comprising outer cutter (10) and a plurality inner blades (20) are made of an ferrous alloy comprising a substrate of an Fe-Cr stainless steel (15,25) and a hardened layer (16,26) of improved hardness and wear resistance. The substrate has (15,25) a Vickers hardness of 400 or more. The hardened layer (16,26) has a Vickers hardness of at least 700 and a thickness of 2 to 15  $\mu\text{m}$ . In particular, it is preferred that the hardened layer (16,26) is a diffusion layer comprising at least 90 vol% of inter-metallic compounds of Al and Fe relative to a total volume of the diffusion layer, and Al content included within a depth of at least 2  $\mu\text{m}$  of the diffusion layer is 35 to 65 % by weight based upon total weight of a region of the diffusion layer ranging up to the thickness of at least 2  $\mu\text{m}$ . When the ferrous alloy is polished to form the outer cutter (10) and inner blades (20), it is possible to provide sharp cutting edges (14,24) of the outer cutter (10) and inner blades (20), while preventing the occurrence of burrs or micro-chippings at the cutting edges.

FIG. 1



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# EUROPEAN SEARCH REPORT

Application Number  
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 December 1998	Examiner Herygers, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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